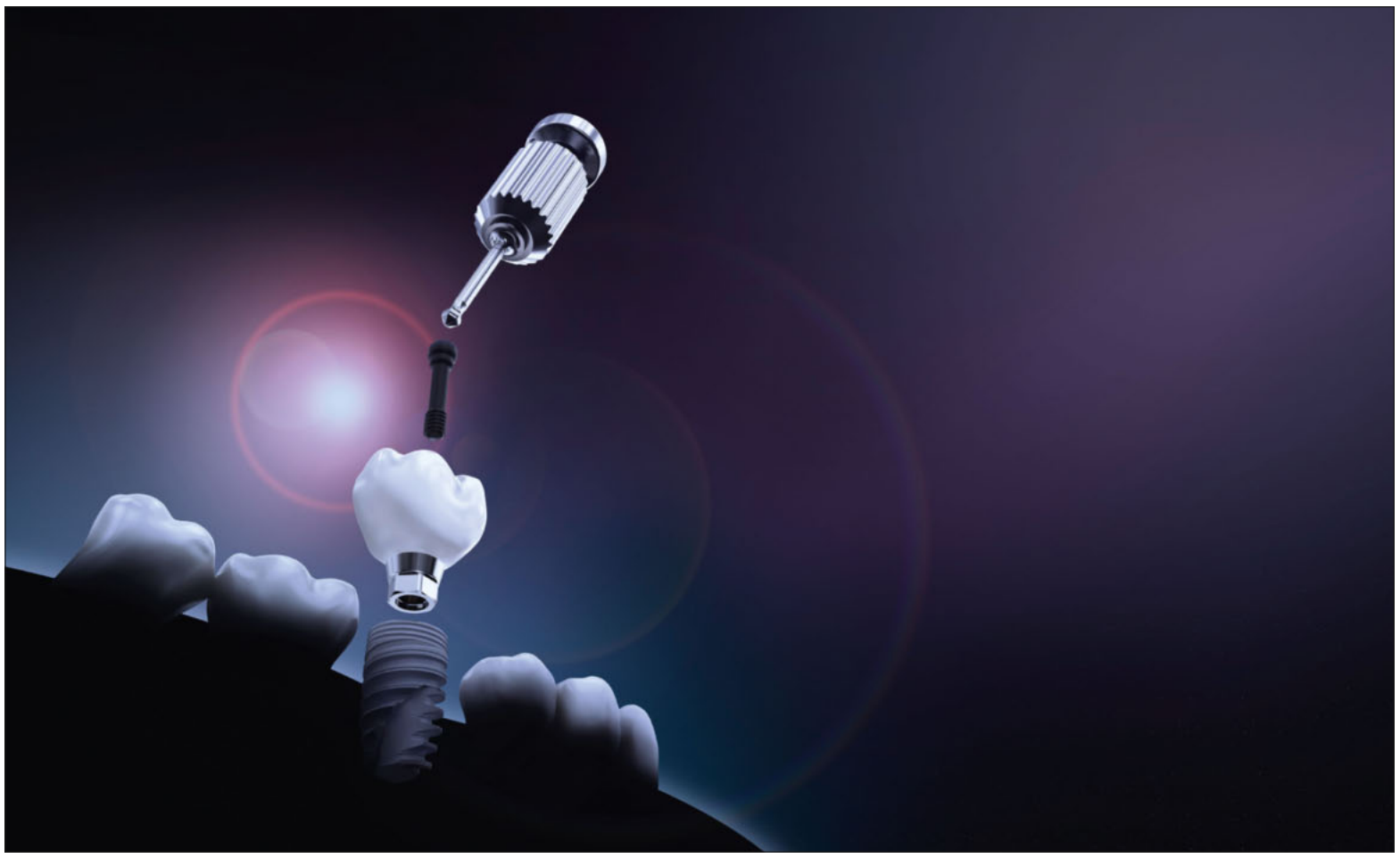
Nobel Biocare NEWS

Information for the Osseointegration Specialist

Issue 1/2015



Bringing Innovation Back

A complete posterior solution — Nobel Biocare brings innovative new technology to the molar region.

Large extraction sockets, limited accessibility, tough-to-remove excess cement and high occlusal forces—these are just some of the challenges a clinician faces when restoring a single tooth in the posterior. Given that molar replacement is among the most common indications, these challenges are encountered regularly in most dental implant practices.

By Frederic Love

With an ingenious combination of new wide-platform implants and restorative options—all specially designed for molar sites—Nobel Biocare is now presenting a complete, state-of-the-art posterior solution.

This solution efficiently and predictably addresses the problems of molar replacement in order to make life easier for both the dental professional and patient alike. The company is offering not one but two complete implant systems especially well suited to meet posterior challenges. Both are intended to shorten time-to-teeth for the patient by providing high primary stability.

> *"Tested as one system, these innovative new components provide optimal treatment outcomes together."*
>
> — Dr. Russell Baer

NobelActive

One option is NobelActive, whose distinctive design and surgical protocol combine to provide sufficient primary stability for Immediate Function in cases where it might not be possible with other implants.

Designed like all NobelActive implants for high primary stability— even in soft bone and extraction sockets—a new wide platform (WP) connection provides a diameter ideal for the molar region. The wider body provides a better fit for the large extraction sites typical in the molar region and presents a wider implant platform for an optimized emergence profile.

To read more about NobelActive WP, please turn to page 5.

NobelParallel CC

Option two is NobelParallel Conical Connection (CC), which combines a well-documented parallel-walled implant body with an advanced internal connection. NobelParallel CC consequently offers extraordinary flexibility. Engineered for use in all bone qualities, the NobelParallel CC WP 5.5 mm option has been designed to provide predictable placement and an optimized emergence profile in large molar sites.

Together, the implant design and the straightforward surgical protocol of this new product form a formidable combination that's intended to allow Immediate Function in many cases by providing sufficient primary stability.

Want to read more about NobelParallel CC? Just turn the page!

Both new WP implants feature Nobel Biocare's internal conical connection with a hexagonal interlocking mechanism that provides high mechanical strength. It goes without saying that they are also compatible with Nobel Biocare's most innovative restorative solutions.

Totally cement-free

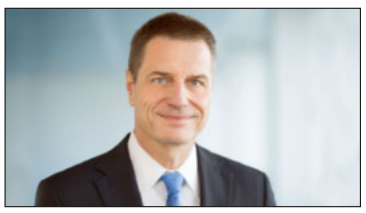
Designed specifically for the posterior, new anatomically shaped PEEK healing and temporary abutments are designed to match molar contours for an optimized emergence profile; and when it comes to the final restoration, the NobelProcera FCZ (full-contour zirconia) Implant Crown is designed for strength and predictability even under the high occlusal forces of the posterior.

Screw-retained, the FCZ Implant Crown completely eliminates the need for cement (even the titanium adapter is mechanically retained); and Omnigrip tooling and screws make it possible to angle the screw channel by as much as 25° in any direction off the screw axis. Naturally, this revolutionary solution provides easy access and secure handling despite the limited vertical space and visibility characteristic of the posterior. <

→ nobelbiocare.com/bringinginnovationback

In this Issue

From the CEO



Richard Laube, CEO

From a single posterior tooth restoration, to some of the most advanced reconstructions of the oral cavity, Nobel Biocare has been developing the products and solutions you need for the last 50 years. That drive for excellence in innovation and patient care will continue.

The 1965 treatment of Gösta Larsson was based on the original scientific insight from the late Professor P-I Brånemark's discovery of osseointegration in 1952.

Nobel Biocare continues building on that heritage by leading the industry in releasing and scientifically documenting innovative solutions that dramatically improve the quality of life of millions of people around the world.

Our relentless pursuit of advancing the frontiers of dental treatment has brought our latest innovations to the back of the mouth. Single-tooth restorations in the posterior region are one of the most common indications, and as such, require the latest techniques and technology to provide safe, efficient and reliable treatment.

Our new complete posterior solution is composed of components that stand out on their own, but stand stronger together. Each product plays its part in a system designed to overcome the key challenges you face in the posterior. Read more about this remarkable solution—stronger than ever and 100% cement free—on the pages to follow. <

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NobelParallel™ Conical Connection

The straightforward implant — new from Nobel Biocare!

The new NobelParallel Conical Connection brings the best of Nobel Biocare's extensive design experience to clinicians and patients. Based on tried and true biomechanical and surface chemistry concepts, this new implant provides strength, stability and a perfectly fitting platform for both simple and advanced cement-free restorations alike.

By Michael Stuart

Figure 1

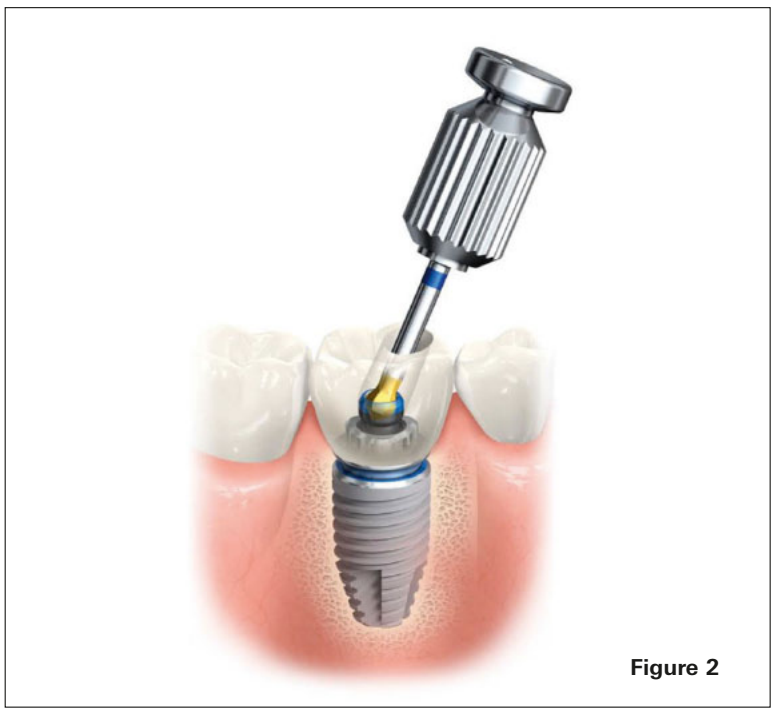


Figure 2

Figure 1. Combining a parallel-walled implant body with a tapered apex, NobelParallel Conical Connection is a reliable and straightforward implant. **Figure 2.** With its conical interface and a hexagonal interlocking mechanism, NobelParallel Conical Connection's advanced connection offers high strength and restorative flexibility. It opens up access to innovative solutions such as the NobelProcera ASC (angulated screw channel) Abutment and the NobelProcera FCZ (full-contour zirconia) Implant Crown.

When the late Professor Per-Ingvar Brånemark placed the very first modern dental implants fifty years ago, the implants he used had parallel walls. Those implants stayed firmly in place for that patient, Gösta Larsson, for the rest of his life. Half a century later, Nobel Biocare continues to develop this straight design concept with the launch of NobelParallel Conical Connection.

This new implant combines best-in-class features from the well-proven Brånemark and Nobel-Speedy Groovy parallel-walled implant systems with an advanced internal connection. It marks the latest breakthrough in Nobel Biocare's long-standing pursuit of innovation that benefits both patients and clinicians.

Stability and flexibility in parallel

NobelParallel Conical Connection offers extraordinary flexibility. It is designed for use in all bone qualities and for a wide range of indications. With implant sizes ranging from a 3.75 mm Narrow Platform variant to a 5.5 mm Wide Platform option, NobelParallel Conical Connection can be used in both the anterior and the posterior.

Whether used in the posterior or anterior regions, the straightforward surgical protocol will be appreciated by both experienced clinicians and those early in their implant careers. It offers flexibility and shortens treatment time, benefitting the patient too.

Straight to stability

Together, the surgical protocol and implant design form a unique combination intended to provide good primary stability in order to enable Immediate Function where possible. The thread design and tapered apex of the implant help ensure primary stability by allowing both under-preparation of the surgical site and bicortical anchorage.

Osseointegration during the initial healing phase is enhanced by Nobel Biocare's unique TiUnite surface when compared with machined surfaces.

A strong connection

This evolution of the original implant design achieves its full potential when used together with original Nobel Biocare components.

Like all Nobel Biocare implants, NobelParallel Conical Connection is designed to achieve predictable results when used with Nobel Biocare restorative solutions.

The implant has an internal conical connection with hexagonal interlocking for high mechanical strength. This advanced connection also opens the door to a wide range of innovative restorative options.

These include the NobelProcera ASC (angulated screw channel) Abutment for easier access and increased esthetic possibilities, and the NobelProcera FCZ (full-contour zirconia) Implant Crown, which possesses the strength required to deal with high occlusal forces in the posterior.

Advanced, cement-free solutions such as these make it possible for NobelParallel Conical Connection to provide optimized results without the risks associated with excess cement.

In short, clinicians looking for one implant system to meet all their requirements need look no further than to NobelParallel Conical Connection. <

→ More to explore:
Find out more about NobelParallel Conical Connection today at nobelbiocare.com/nobelparallel.
References supporting statements made in this article can be found in the online article at: nobelbiocare.com/news.

Recent Findings

TiUnite® osseointegration

The higher bone-to-implant contact of TiUnite vs. machined implants is associated with upregulation of molecular determinants of bone remodeling and regeneration. (Lennerås et al., Clin Implant Dent Relat Res. 2014 [Epub]).

An important discovery in osseointegration: Histological and morphological changes in hard tissues surrounding TiUnite implants are correlated with gene expression changes of three important regulators of both bone remodeling and regeneration. The animal study revealed that the molecular pathway involved in osseointegration was significantly more upregulated for TiUnite than with machined implants. At the bone-implant interface, the TiUnite surface shows more mineralized bone, higher bone-to-implant contact, and fewer points of separation of bone from implant during sample preparation, suggesting stronger implant retention by the bone. Interestingly, these differences are mirrored by changes in expression of genes involved in the osseointegration process. Specifically, the ratio of RANKL to OPG—the two competing RANK ligands—was significantly different around the two types of implants at 1, 3, 6, and 14, but not 28 days post implantation. This suggests that the surface properties of TiUnite "rapidly stimulate bone formation and remodeling at the bone-implant interface" and "promote osseointegration."

→ onlinelibrary.wiley.com/enhanced/doi/10.1111/cid.12276/

Healthy tissue and low complication rates

Clinical follow-up reveals excellent results for zirconia abutments on NobelReplace and NobelActive implants. (Passos et al., Clin Oral Implants Res. 2014 [Epub])

The study retrospectively (1-12 years' follow-up) compared five implant systems: two with a standard platform design, 3i (n=21) and NobelReplace (n=50), and three with a platform switch design, Astra (n=26), NobelActive (n=12), and Straumann BL (n=49), to replace single anterior teeth. Regarding soft and hard tissue responses, the bleeding-on-probing (BoP) levels were lower but not significant for platform switch vs. standard platform designs (BoP+ 4% vs. 12%, p= 0.2744), and platform switch designs showed significantly less bone loss (0.5–0.7 mm vs. 1.9–2.0 mm at 4-5 year evaluation, p< 0.000001). Zirconia abutments on NobelReplace and NobelActive implants experienced no fractures, and, those on NobelActive implants had no other complications, which trended toward better performance than all other systems in terms of prosthetic success.

→ onlinelibrary.wiley.com/enhanced/doi/10.1111/clr.12504/

Stable soft tissue

Nobel Biocare third-party CAD/CAM zirconia abutments show stable soft tissue in a mean follow-up of 23.2 ±7.6 months. (Khzam et al., J Esthet Restor Dent. 2014 Sep-Oct;26(5):332-44)

This clinical case series reviewed 15 implants restored with Nobel Biocare third-party Procera zirconia abutments (on Astra Tech) for a mean period of 23.2 ±7.6 months. Stable soft tissue from implant placement to follow-up observations was shown by minimal mesial and distal papillary height loss and mid-buccal gingiva recession, none of which reached significance. Similarly, Jemt's index score assessing papilla health had no significant changes between implant placement and follow-up observations. These results indicate that Nobel Biocare CAD/CAM third-party abutments support good stability of the soft tissue architecture.

→ onlinelibrary.wiley.com/enhanced/doi/10.1111/jerd.12083/

"Above all, they select the right content!"

Collectively, the Nobel Biocare Symposia 2015 will serve as a year-long tribute to the first clinical application of osseointegration fifty years ago. Following in Brånemark's footsteps at each of these meetings, Nobel Biocare will be celebrating scientific progress by offering an array of educational opportunities and an introduction to the latest innovations in the field.

By Frederic Love

No two Nobel Biocare Symposia are alike, yet commendation and praise from previous participants are persuasively similar.

"At a Nobel Biocare Symposium you can not only delve into topics of local and regional interest," said New York participant Dr. Carlos Moglianesi, "but also explore those that matter in the world of dentistry globally."

In a similar vein, Dr. Salomón Fainsilber—attending a symposium in Mexico—commented: "Nobel Biocare raised the level of a national symposium here to that of a first-class international event."

Nobel Biocare Symposia give participants an opportunity to learn more about a broad range of new products, and how they can best be put to use. The creos regenerative solutions and the NobelProcera ASC (angulated screw channel) Abutment—and accompanying Omnigrip tooling—were big hits at last year's symposia.

This year, advanced posterior solutions, NobelClinican updates, and a variety of new components will be in focus.

When asked at the end of the Nobel Biocare Symposium in Los Angeles last year why he would recommend similar symposia to others, Dr. Perry Hollenbeak replied simply, "Because they are a tremendous gathering of knowledge and honesty." Another participant, Dr. Robert Wolf, was apparently of the same mind. "This has been such an awesome learning event! And with great, timely information from leading clinicians!"

Master Dental Technician Oliver Krieger of Nuremberg, Germany, attended the German-Austrian-Swiss Symposium in 2014. He subsequently wrote to Nobel Biocare to say: "I find the exchange between technology and dentistry very exciting—for me it's a theme of the future. Nobel Biocare brings symposia and training together with distinguished speakers. It's great to spend time with colleagues in this pool of knowledge, sharing experiences and collecting new ones to take home. It is also interesting to learn about the science behind Nobel Biocare's products."

The needs of dental patients for better esthetics, improved function and greater confidence are the same all over the world. This is why the company has located these symposia at sites accessible to customers, wherever they live and work. There will be meetings in eight cities on four continents this year.

"I have been to many Nobel Biocare events and have always had good experiences," said Dr. Bernd Quantius of Mönchengladbach, Germany, recently. "The organization is very good, but above all they select the right content—that's why I always recommend that my colleagues take the time to attend a Nobel Biocare Symposium." <

Nobel Biocare Symposia 2015

April 17–19	Nobel Biocare Symposium India in Goa
April 23–24	Nobel Biocare Symposium Nordics in Stockholm
May 15–17	Nobel Biocare Symposium China in Macau
June 12–14	Nobel Biocare Symposium Canada in Muskoka
June 25–27	Nobel Biocare Symposium France in Monaco
July 23–25	Nobel Biocare Symposium Australia in Sydney
September 17–20	Nobel Biocare Symposium USA in Las Vegas
November 6–7	Nobel Biocare Symposium UK in London

→ More to explore!
For more information or to register for any of the Nobel Biocare Symposia this year, please visit nobelbiocare.com/symposia2015

As Innovative Today as the Day it was Launched

For a predictable and efficient restoration: Make it Snappy™.

Tried and true, Nobel Biocare's Snappy Abutment provides an elegant solution to a number of vexing restorative problems.

By Christian Ebener

Back in the early 2000s, Nobel Biocare's product development team interviewed a group of leading clinicians to learn more about their needs and concerns. During these conversations, the restoration of dental implants in the posterior was discussed at length. The clinicians called attention to two main challenges: thick mucosa and limited vertical space.

In 2005, Nobel Biocare released a solution to meet both these challenges, and a decade later, Nobel Biocare's Snappy Abutment remains a popular choice for clinicians, offering both predictability and efficiency.

The sound of perfect placement

Thick mucosa in the posterior can make it difficult to restore on implants in this area. It can interfere with the process of placing the healing cap and impression coping, making it hard to know whether the correct seating has been achieved.

The Snappy Abutment eliminates this uncertainty as its associated healing caps and impression copings literally "snap" into place, indicating that the clinician can safely proceed to the next step of the treatment process.

Quick, accurate identification: Nobel Biocare's Snappy Abutments are clearly laser marked for easy identification of the abutment height (4.0 mm or 5.5 mm). Snappy Abutments for implants with internal tri-channel and conical connections are also color-coded by platform size.

The lack of space in the posterior is also less of an issue for clinicians opting for the Snappy Abutment. The short Unigrip screwdriver makes tightening the abutment screw as easy as possible when there is little room to maneuver.

To make life even easier for the clinician, a screwdriver is not required for the placement of the snap-on impression coping, which is designed with a very low profile to provide maximum free space.

The Snappy Abutment also makes treatment more comfortable for the patient. As it plays the role of both the temporary and final abutment, there's no need to interrupt soft tissue healing. Overall, it makes treatment faster and more straightforward, and significantly more cost efficient.

No mistaking a quality restoration

Clearly laser marked, it's quick and easy to identify which size of Snappy Abutment the clinician is working with. For the tri-channel and conical connection versions, identification is simple thanks to color-coding. Members of the same referral network can even talk colors instead of sizes.

What's more, for the sake of efficient inventory control, all the components needed to complete a case with a Snappy Abutment come in a single package. The abutment, the screw, the healing cap, and both the temporary and impression copings are not just delivered together, but sterilized too, so they can be used straight out of the package.

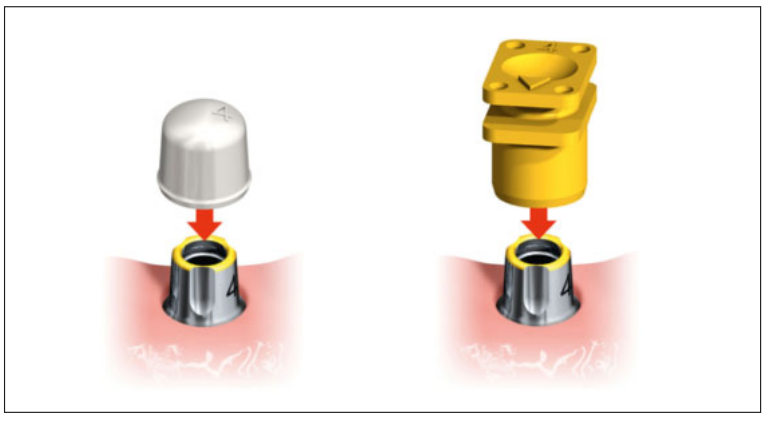
In summary, whether a clinician is new to implant dentistry or a practitioner with decades of experience, Nobel Biocare's Snappy Abutment provides an efficient and predictable restorative solution for the posterior. <

→ More to explore

Discover Nobel Biocare's full range of prosthetic solutions at:
nobelbiocare.com

All you need in one package: For efficient inventory control, all the Snappy Abutment components the clinician needs come in one package, already sterilized for immediate use.

Versatile assortment. Whatever the clinician's preferred implant connection, there's a Snappy Abutment to match. Snappy Abutments are available for all Nobel Biocare implant connections: internal conical, internal tri-channel, and external hex.



Predictable, efficient seating. An audible "snap" when the Impression Coping and Healing Cap are fully engaged leaves the clinician in no doubt that the components have been seated correctly.

Take the Next Step in Patient Treatment Satisfaction

The All-on-4® treatment concept's formula for success: scientifically-backed original Nobel Biocare components combined with world-class training and education.

By Jim Mack

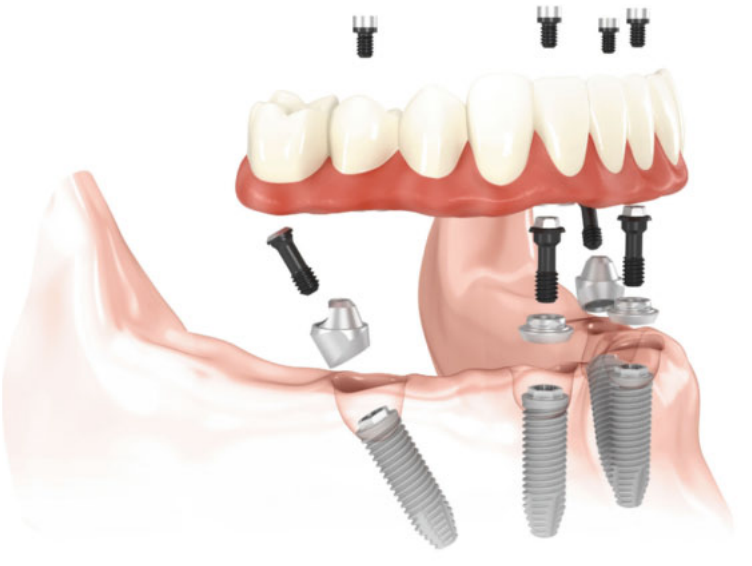
Implants designed for Immediate Function, original Multi-unit Abutments and easy-to-handle, precision-milled NobelProcera restorations are just the products behind the All-on-4® treatment concept. Only in the hands of a team of well-trained professionals do they genuinely become a solution.

T&E
Training and Education

Nobel Biocare offers courses ranging from the fundamentals of implant treatment to the most complex procedures, all taught by industry-leading experts from around the globe. The first implant you place is the beginning of an exciting professional journey, and T&E will help you develop long after that. With our unique products and solutions, the treatment possibilities available to you are virtually unlimited—and so are your learning opportunities.

When it comes to the All-on-4® treatment concept, our course offering is unmatched, quite simply because we are the only company offering this original solution. Many have tried to mirror this groundbreaking concept, but only we have the scientifically documented success to back it up.

Nothing compares to the original after all. Learn from the best, and experience it yourself! <



The All-on-4® treatment concept's success is based on the combination of original Nobel Biocare products with Nobel Biocare training and education. Apply for a course today: nobelbiocare.com/courses.

Upcoming Events

Meet Nobel Biocare at events around the world.

Implante in Rio
April 16–18
Rio de Janeiro, Brazil

Scandefa
April 16–17
Copenhagen, Denmark

Nobel Biocare Symposium
April 17–19
Goa, India

Dental Salon
April 20–23
Moscow, Russia

Nobel Biocare Symposium
April 23–24
Stockholm, Sweden

CDA Convention
April 30 – May 2
Anaheim, California, USA

AACD Congress
May 6–9
San Francisco, California, USA

ODA Annual Meeting
May 7–9
Toronto, Canada

Forum Dental
May 7–9
Barcelona, Spain

ADI Congress
May 14–16
Glasgow, United Kingdom

Nobel Biocare Symposium
May 15–17
Macau, China

EAED Congress
May 28–30
Florence, Italy

EuroPerio 8
June 3–6
London, United Kingdom

SECOM Congress
June 4–6
Oviedo, Spain

Nobel Biocare Symposium
June 12–14
Muskoka, Ontario, Canada

Nobel Biocare Symposium
June 25–27
Monaco, France

Nobel Biocare Symposium
July 23–25
Sydney, Australia

Nobel Biocare Symposium
September 17–20
Las Vegas, Nevada, USA

FORum
October 16–17
Vienna, Austria

Nobel Biocare Symposium
November 6–7
London, United Kingdom

→ More to explore
For the most recent updates, visit: nobelbiocare.com/events

The Crown that Rules them All: NobelProcera® FCZ Implant Crown

Patients, clinicians and dental laboratories all want restorations they can rely on.

The NobelProcera FCZ (full-contour zirconia) Implant Crown combines full-contour strength that's tough enough for the posterior with restorative flexibility that's hard to beat ... and there's no cement in sight.

By Michael Stuart

CAD/CAM manufactured using high-strength translucent zirconia—and providing the opportunity to create angulated screw channels—the NobelProcera FCZ Implant Crown is designed for predictable strength, esthetics and function.

No cement, no chipping, no problems

Suitable for all tooth positions, the strength of the FCZ Implant Crown ensures predictability even under the high occlusal forces of the posterior, which makes it an ideal restoration for the molar region. There's no need to worry about veneer chipping either, as the full-contour characteristics of the NobelProcera FCZ Implant Crown eliminate the need for veneering.

Combining strength with restorative flexibility, the NobelProcera FCZ (full-contour zirconia) Implant Crown is an ideal solution for the posterior.

The biocompatibility of the materials used represents an additional benefit by supporting biological stability in the areas where it matters most. Plus, being screw retained, the FCZ Implant Crown is completely cement-free, eliminating the risks associated with excess cement. Even the titanium adapter is mechanically retained.

As it can be placed in the posterior, the FCZ Implant Crown gives clinicians the chance to increase the number of screw-retained restorations they place. This means more patients treated with a restorative solution that is easier to maintain and retrieve—and all without cement.

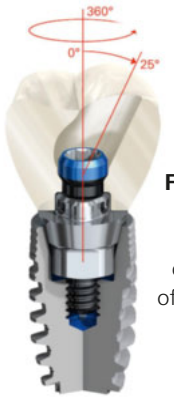
The NobelProcera FCZ Implant Crown is designed for use with Nobel Biocare's extensive range of conical connection implants. Combining Nobel Biocare components means that all the elements can be trusted to work together seamlessly for the perfect treatment outcome.

Not veneered, but engineered

Choose to use an angulated screw channel (ASC) and the screw access hole can be placed anywhere between 0° and 25° within a 360° radius. This means that it can be angled towards the front of the mouth for easy access even in tight posterior spaces; it also means that the access channel doesn't need to be placed on the cusp of the tooth, where it might affect occlusion.

Working on the restoration is further simplified with the associated Omnigrip Screwdriver. Its effective pick-up function and secure grip on the screw help the clinician to work safely and efficiently.

Natural-looking tooth color is another benefit offered by the FCZ Implant Crown. Whichever of the eight available shades is used, the color will be uniform throughout the material. This means adjustments can be made without having to worry about discoloration. It's also no problem to use cutbacks or staining to achieve the desired esthetic effect.



The NobelProcera FCZ Implant Crown can incorporate an angulated screw channel (ASC). This offers easy access to the restoration and can maintain the occlusal function.

For anyone looking for restorations they can rely on, the NobelProcera FCZ Implant Crown provides extraordinary strength for long-term predictability, and delivers restorative flexibility too. As a result, it's well on its way to becoming "the crown that rules them all!" <

→ nobelbiocare.com/bringinginnovationback

Wide Platform Version of NobelActive® Now Available for the Molar Region

A fitting design for high primary stability and esthetic excellence

The NobelActive range of implants has been an enormous success story in the anterior. In fact, the narrow NobelActive 3.0 has given clinicians the option to conduct implant treatment in areas where it was not previously possible with conventional implant therapy. Now Nobel Biocare is extending the design advantages of NobelActive to the posterior for the first time.

By Robert Bañez

To condense bone gradually, the tapered body of the NobelActive design features threads that narrow towards the apex, while the apex itself features drilling blades to preserve bone by allowing a smaller osteotomy. These features were all devised to ensure high primary stability, even in soft bone and extraction sockets.

Simply unique

NobelActive is one-of-a-kind in that it gives clinicians the option to adjust the implant position during insertion. Reverse cutting flutes on the apex make it possible to control the desired angulation following final drilling. NobelActive implants—including the new WP models—can be partially reversed and then redirected to achieve the best possible restorative orientation.

All NobelActive versions demonstrate high fatigue and torque strength, and the WP platform is no exception.

NobelActive's characteristic internal conical connection, with its conical interface and hexagonal interlocking mechanism, further enhances the strength of this implant, while providing restorative flexibility at the same time. Naturally, the NobelActive WP is compatible with Nobel Biocare's most innovative restorative solutions.

These include cement-free options such as the FCZ Implant Crown (see the article immediately above), and the NobelProcera Abutment with angulated screw channel for easier access and increased esthetic options.

The implant's back-tapered coronal design, which can help preserve alveolar bone for better soft tissue support, is yet another feature developed with natural-looking esthetics in mind. <

→ More to explore: nobelbiocare.com/bringinginnovationback

NobelActive Wide Platform (WP): With an option for a shorter body (7 mm) to avoid critical anatomical structures—such as nerves—and a wider diameter (5.5 mm) providing ample platform space for an optimized emergence profile, this implant has been designed specifically to deliver excellent results in the molar region.

New Opportunities Ahead

It's time for an efficient solution that's stronger than ever — and 100% cement-free.

Nobel Biocare is bringing innovation back—to the back of the mouth, that is—by shining a helpful light on challenges like large extraction sockets, limited accessibility, tough-to-remove excess cement, and high occlusal forces.

By Jim Mack

With molar replacement among the most common indications, Nobel Biocare's new complete posterior solution is the answer. Challenges are overcome efficiently and predictably using new wide-platform implants and restorative options, all specially designed for molar sites.

Fifty years of experience

Multiple innovations combine to make this solution complete. The new implants and related components are the product of unmatched experience and a scientific heritage that stretches back to 1965. Nobel Biocare's new posterior solution provides several options, each engineered specifically for the posterior.

A wide range

The first implant option is a new NobelActive platform with a wider diameter implant body (Ø5.5 mm) to better fit the large extraction sites in the molar region and a wider platform for an optimized emergence profile. It's also available in the shorter 7 mm length to avoid critical anatomy such as nerves.

One can also opt for the new NobelParallel Conical Connection which can be used in all bone qualities and a range of indications. It also comes in a Ø5.5 mm version for molar sites.

More to restore

New PEEK (polyetheretherketone) healing and temporary abutments are anatomically shaped with molar contours. And for the final restoration, the screw-retained and cement-free NobelProcera FCZ (full-contour zirconia) Implant Crown is designed for strength and predictability.

Chipping is not a concern, as the full-contour nature of the new implant crown removes the need for veneering (see previous page). It's also available with an angulated screw channel (ASC) for easy access in the posterior. <

A complete posterior solution

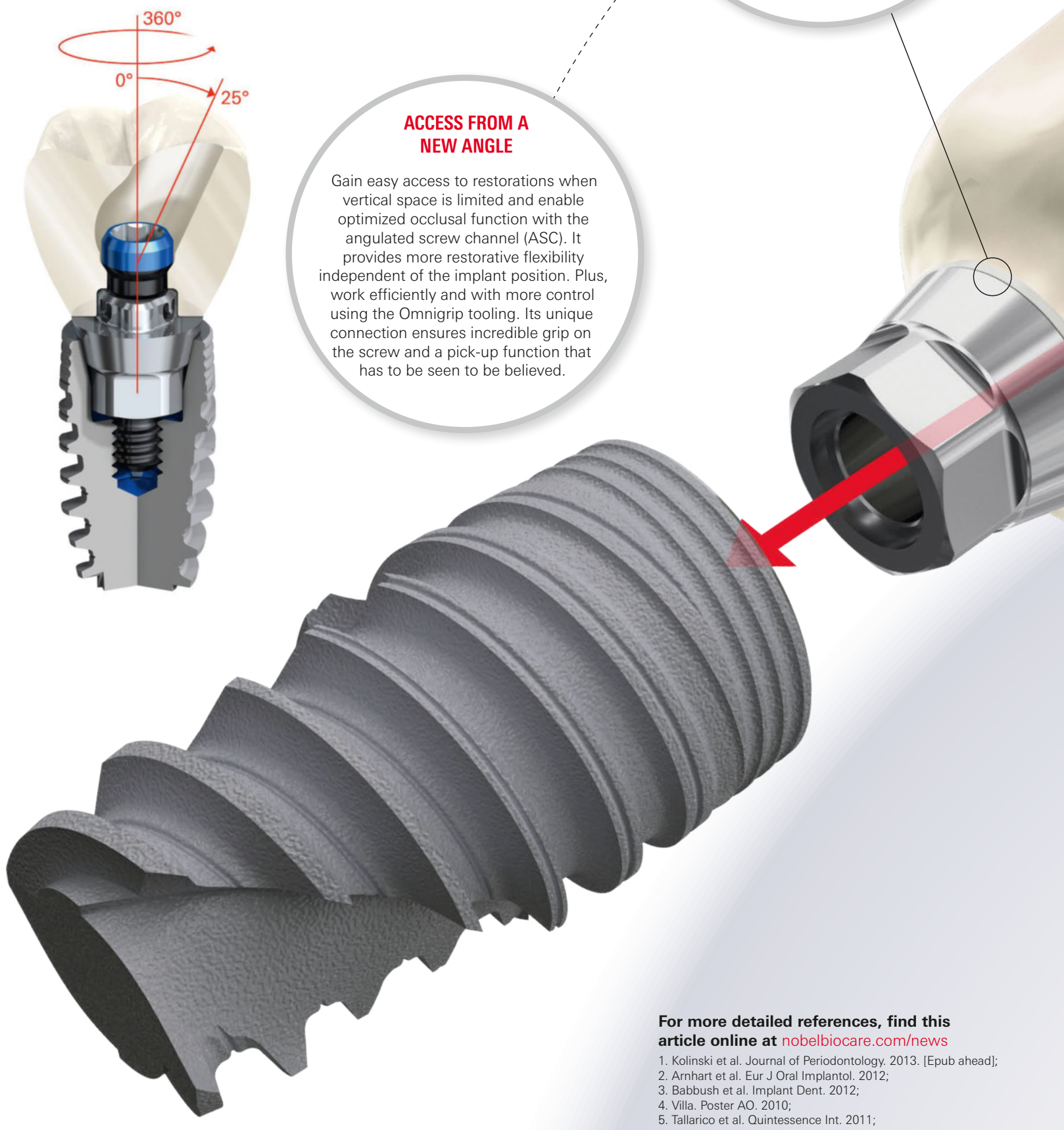
To keep pushing forward, we're bringing innovation to the back. Connect with your entire treatment team and achieve shorter time-to-teeth with Nobel Biocare's complete posterior solution. It offers new ways to overcome the challenges of working in the posterior region while reducing complexity and risks.

COMPLETELY CEMENT-FREE

Reduce the risks associated with excess cement with a screw-retained implant crown.[7,8] Even the adapter is mechanically retained.

ACCESS FROM A NEW ANGLE

Gain easy access to restorations when vertical space is limited and enable optimized occlusal function with the angulated screw channel (ASC). It provides more restorative flexibility independent of the implant position. Plus, work efficiently and with more control using the Omnigrip tooling. Its unique connection ensures incredible grip on the screw and a pick-up function that has to be seen to be believed.



For more detailed references, find this article online at nobelbiocare.com/news

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FULL CONTOUR, FULL STRENGTH

Minimize chipping with a CAD/CAM-manufactured monolithic zirconia implant crown.[9] It combines remarkable strength and workflow efficiency. You can maintain esthetics too, as the color is applied through the whole material.

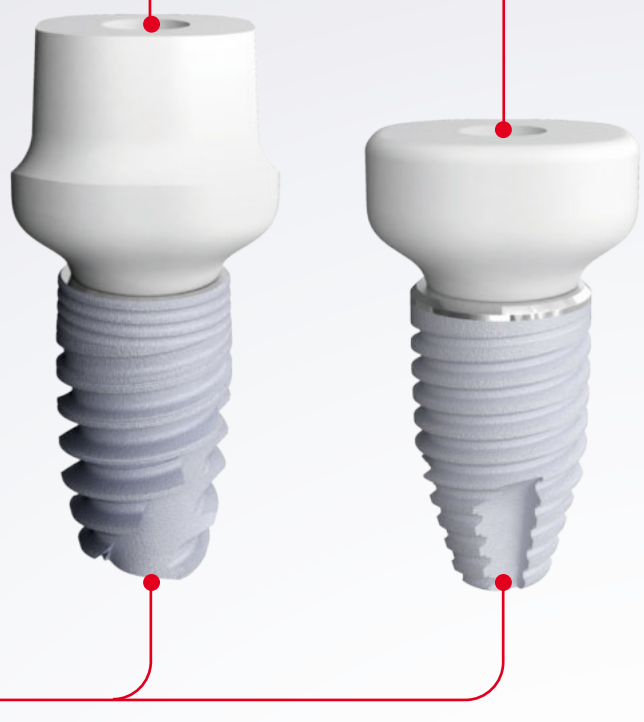
Available in eight shades

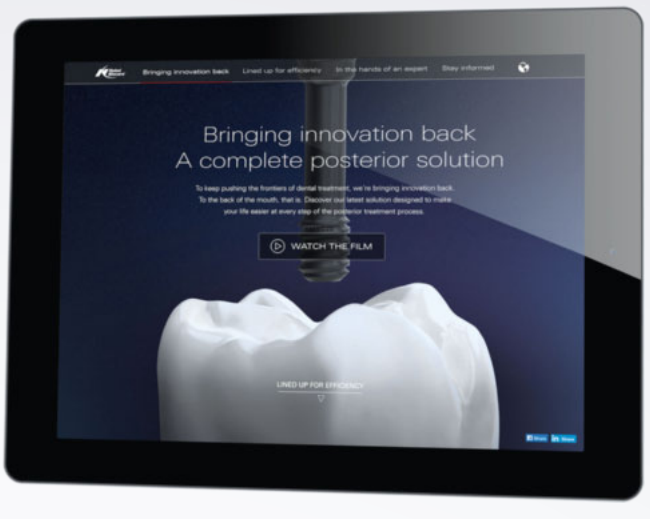
Shaped by reality

Simplify treatment and reduce costly chair time with abutments designed specifically for the posterior. The new PEEK healing and temporary abutments are anatomically shaped to match the contours of the molars. This means fewer shape adjustments are needed, so you can achieve an optimized emergence profile in less time.

Immediate stability

Offer your patients shorter time-to-teeth. This is exactly what the NobelActive and the new NobelParallel Conical Connection implants are designed for. Achieve immediate implant placement and Immediate Function where it might otherwise be challenging. The unique combination of implant design, proven TiUnite surface and drilling protocol help to ensure high primary stability, even in soft bone situations.[1–6] And, with the new wide platform, you get the full benefit of these attributes in the molar region. It's the solid base you need to create an optimized emergence profile for the final restoration.





FIND OUT MORE

View the complete posterior solution in the hands of an expert. Scan the QR code to watch a clinical case video or for more information, visit: nobelbiocare.com/bringinginnovationback.

Opening the Eyes of the Patient

Using NobelClinician® Communicator, Dr. Luc Vrielinck walks his patients through the treatment process step-by-step.

Jim Mack, Managing Editor of *Nobel Biocare News*, recently posed a few questions to Dr. Luc Vrielinck, who has extensive experience using the NobelClinician Communicator iPad® app to walk prospective implant patients through the entire treatment sequence step-by-step.

Oral and maxillofacial surgeon Dr. Luc Vrielinck is in private practice at *Ziekenhuis Oost Limburg* in Genk, Belgium. He works extensively with computer- and model-based implant planning systems. His special field of interest is the atrophic maxilla and treatment with zygomatic and pterygoid implants, and he teaches NobelGuide training courses on a regular basis. In this interview, he provides some valuable insight into the use of the NobelClinician Communicator.

How long have you been using NobelClinician Software? Why do you use it?

Dr. Luc Vrielinck: I have been using the NobelClinician Software since the beginning. The 3D analysis of underlying bone structures and the computer simulation of implant planning add a new dimension to the practice of implant dentistry.

Having a view in all directions on the bone anatomy adds to one's clinical knowledge and augments the experience of the clinician. While classic radiology allows us to "see" the bone, (CB)CT analysis and 3D computer planning allow us to define and understand treatment planning.

Knowing and seeing, after all, are two different things.

What has your experience been using NobelClinician as a patient communication tool?

Vrielinck: It has always worked very well, but today I prefer to start discussions using an iPad® rather than a computer screen. Although using the NobelClinician Communicator app requires a few extra steps of preparation before the NobelClinician planning is ready for viewing on the iPad®, it is well worth the effort. The patients are always impressed with the beautiful images and rarely hesitate to point to these images when asking specific questions.

The Communicator app makes it possible for me to explain the general treatment plan to the patient and allows me to visually show the need for additional procedures, such as a bone grafting and the use of membranes for augmenting the thickness of the dentoalveolar border. It can also help me to illustrate the need for a sinus lift, or simply depict the patient's own bone anatomy clearly, which always facilitates a treatment planning conversation.

Q&A
Questions and Answers

What changed when you began using the NobelClinician Communicator iPad® app?

Vrielinck: It works like a natural—and non-intimidating—introduction to treatment planning, after which the clinician can easily start discussing success rates, potential complications and treatment alternatives in order to obtain the informed consent of the patient.

The Communicator app provides an open invitation to discuss the treatment ahead, including treatment choices that need to be made, and makes it possible to discuss much more than which type of implant will be placed.

Explain how you use the Communicator app to discuss the treatment plan with your patients.

Vrielinck: Mostly I start in a cross-sectional view (radiographic cross-sectional image) to explain the bone structure and bone volume.

Dr. Luc Vrielinck has learned from extensive experience how powerful visual information can be when communicating with a patient.

NobelClinician Communicator makes it possible to consult with the patient in a relaxed setting. "It works like a natural—and non-intimidating—introduction to treatment planning, after which the clinician can easily start discussing success rates, potential complications and treatment alternatives," says Dr. Vrielinck.

Next I show a planned implant at its intended location. The virtual implant is depicted in blue, and around the implant is a yellow outline (the safety zone). I describe the importance of this "safety" zone and use it to explain that an actual treatment never can be as precise as depicted on a screen.

I also explain—if appropriate—the relation of the implant to the inferior alveolar nerve or the maxillary sinus. If the yellow zones are larger than the thickness of the bone, this can be viewed easily and provides an opening for me to explain the necessity of grafting procedures in such situations to the patient.

When the different individual implant positions are explained, I often show a 3D bone model of the jaw to the patient, but certainly not in every case. Sometimes the 3D (CB)CT images are difficult for the patients to see, especially in partially edentulous cases.

NobelClinician can shorten treatment time and increase safety. Can you imagine working without it today?

Vrielinck: To me there is no doubt about whether or not I will use NobelClinician. It is simply a part of the pathway leading to the treatment plan.

To my patients, the use of NobelClinician is very straightforward, and they tend to understand it intuitively: Its purpose is to assess the bone volume of the patient, to see if implant treatment is possible or not, to evaluate whether or not there is a need for bone augmentation, and to determine which type of implants can be used.

This assessment results in the formulation of the treatment plan. In the practice of implant dentistry, conscientious planning is a necessity for me, like food and water.

How do your patients perceive the use of such sophisticated technology in their treatment?

Vrielinck: I don't think our patients are surprised to see the team using an iPad® these days. The iPad® is used by the implantologist for explaining the treatment plan to the patient, it is used by the dental nurse in rehearsing the treatment plan before the surgery actually starts, and is used by the administrative treatment coordinator to check which implants and components have to be available and eventually ordered.

If a practice is up to date, well organized and professional, a patient should not be surprised to see us using this technology. Rather, I think they ought to be surprised if they were to meet somebody who is not using it!

Explain why using the NobelClinician Communicator app helps you gain patient acceptance of your proposed treatment plans.

Vrielinck: The communicator app is a basic tool used to present an agglomerate of knowledge to the patient. The process may have started with a prosthetic set-up, and continued with the (CB)CT scan and the subsequent treatment planning, but it will always end up with a final presentation of a solution to the patient, and that's where this app excels.

The communicator app is not fancy imaging software; it is a tool used to present the solution for the patient.

If patients feel that one step logically follows the other to a good solution, they will be inclined to accept the treatment plans proposed via the app in front of them.

But it doesn't stop there. The NobelClinician Communicator app for the iPad® can also be used to explain alternative treatment modalities, paving the way for informed patient consent. <

→ More to explore
To read more about the user-friendly solution for diagnostics, treatment planning and patient communication, please visit:
nobelbiocare.com/nobelclinician

Zygoma Concept for Severe Resorption

Dr. Davó avoided grafting in a severely resorbed maxilla and provided Immediate Function at the same time.

A popular lecturer and a gifted clinical researcher, Dr. Rubén Davó wrote his PhD dissertation on Immediate Function using zygoma implants in 2007. Devoted to spreading the word about his research, and with great experience in the treatment of dentofacial deformities, guided surgery, rehabilitation of patients with atrophied bones and quality of life issues, he shares a difficult yet increasingly common type of case with us here.

By Dr. Rubén Davó

The patient in the case depicted here from 2006 was a 60-year-old woman with severe bone resorption of the upper and lower jaw. When we first met, she wore a complete set of dentures.

Although her chief complaint was discomfort—the dentures were always causing her problems, she said—they were also decreasing her quality of life, not only from a functional perspective but also from a psychological and social point of view.

Looking for a better life

In order to improve her quality of life as soon as possible, the patient was looking for improved esthetics combined with Immediate Function. Because she was so eager for a substantial improvement in her situation, she was unwilling to consider a grafting procedure as an alternative form of treatment.

Figure 1. Intraoral frontal view of the patient without the prosthesis shows severe bone resorption of the maxilla. This is further confirmed via radiographic analysis.

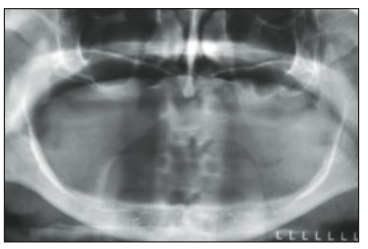


Figure 2. Radiographic analysis confirms the severe bone resorption of the maxilla, making it impossible to place standard implants in the posterior maxilla. The bone height was adequate for placing implants at the desired level in the anterior mandible.

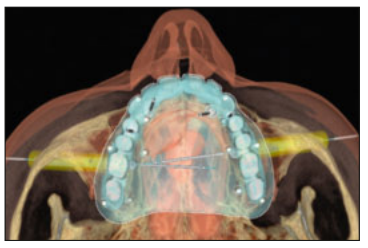


Figure 3. NobelClinician Software allows the preoperative tooth setup to be transferred virtually for prosthetic-driven planning of implant positioning for optimal engagement of residual bone. The choice of implants was made at this point (see details in the article).

Figure 4. The temporary fixed bridge with Immediate Function provided an immediate improvement in the patient's quality of life.

A good candidate

Despite the fact that the patient had been completely edentulous for ten years and displayed severe bone resorption, her overall health was quite good. She had no systemic illnesses, nor any allergies.

We proceeded to analyze the quantity and quality of the available bone with the help of NobelClinician Software, and decided to rehabilitate the maxilla using Brånemark System Zygoma and NobelReplace Tapered Groovy implants.

Step-by-step

For the mandible, we chose to use the All-on-4® treatment concept, basing it in this case on NobelReplace Tapered Groovy implants.

Precision-milled, fixed NobelProcera Implant Bridges were produced for the final prostheses in both the maxilla and the mandible. My colleague Dental Technician Juan Pedro Ramos then created the prosthetics depicted in the adjoining figures.

Based on the patient's request, an Immediate Function protocol was implemented, and she remains very happy with the results today, nine years later.

The time for total treatment? The fixed provisional prostheses were provided within 48 hours, and the total treatment time amounted to six months. <

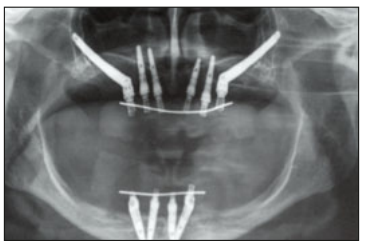


Figure 5. Post-op radiograph with the fixed provisional prosthesis shows NobelReplace Tapered Groovy implants in the anterior maxilla combined with Brånemark System Zygoma implants in the posterior maxilla. In the mandible, the All-on-4® treatment concept with NobelReplace Tapered Groovy implants was used.

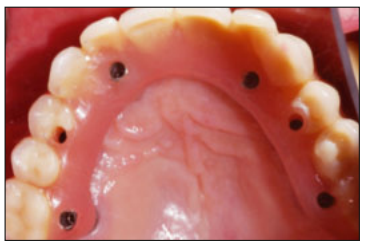


Figure 6. Occlusal view of the final maxillary screw-retained NobelProcera Implant Bridge, showing screw access emergence from the implants. Note the favorable posterior support provided by the Brånemark System Zygoma implants, placed as crestally as possible, thus making bone grafts unnecessary.

Figure 7. In the maxilla, a fixed NobelProcera Implant Bridge was used as a final prosthesis after six months, providing enhanced esthetics and strength, through the use of a biocompatible, precision-milled titanium implant framework.

→More to explore

See related zygoma publications by Dr. Davó in the online version at: nobelbiocare.com/news

Figure 8. After six months: For the sake of strength and ease of maintenance, a fixed NobelProcera Implant Bridge with acrylic teeth was used as a final prosthesis in the mandible.

Figure 9. Smile of the patient after placement of the fixed provisional prostheses showing good proportion and balance from an esthetic point of view.

Making decisions together. "I virtually became a part of the team," says Gerda Jacobs, seen here with Dr. Luc Vrielinck.

Comfortable and Confident, Every Step of the Way

Gerda Jacobs is a 62-year-old Dutch woman who had had problems with her gums since childhood. Last year she underwent a procedure with four zygoma implants that has changed her life. This is her first-hand story.

By Gerda Jacobs

Over the years, I learned to live with a removable denture, which worked fine until recently. I started to get frequent infections and found myself in considerable pain when eating even simple foods, like toast. My gums were easily bruised and they were often swollen. It became impossible to brush my teeth without bleeding.

My dentist diagnosed me with severe periodontitis and referred me to Dr. Vrielinck. With the help of 3D imaging, he explained every detail of the implant-based treatment he was proposing and what other treatment options were available for me.

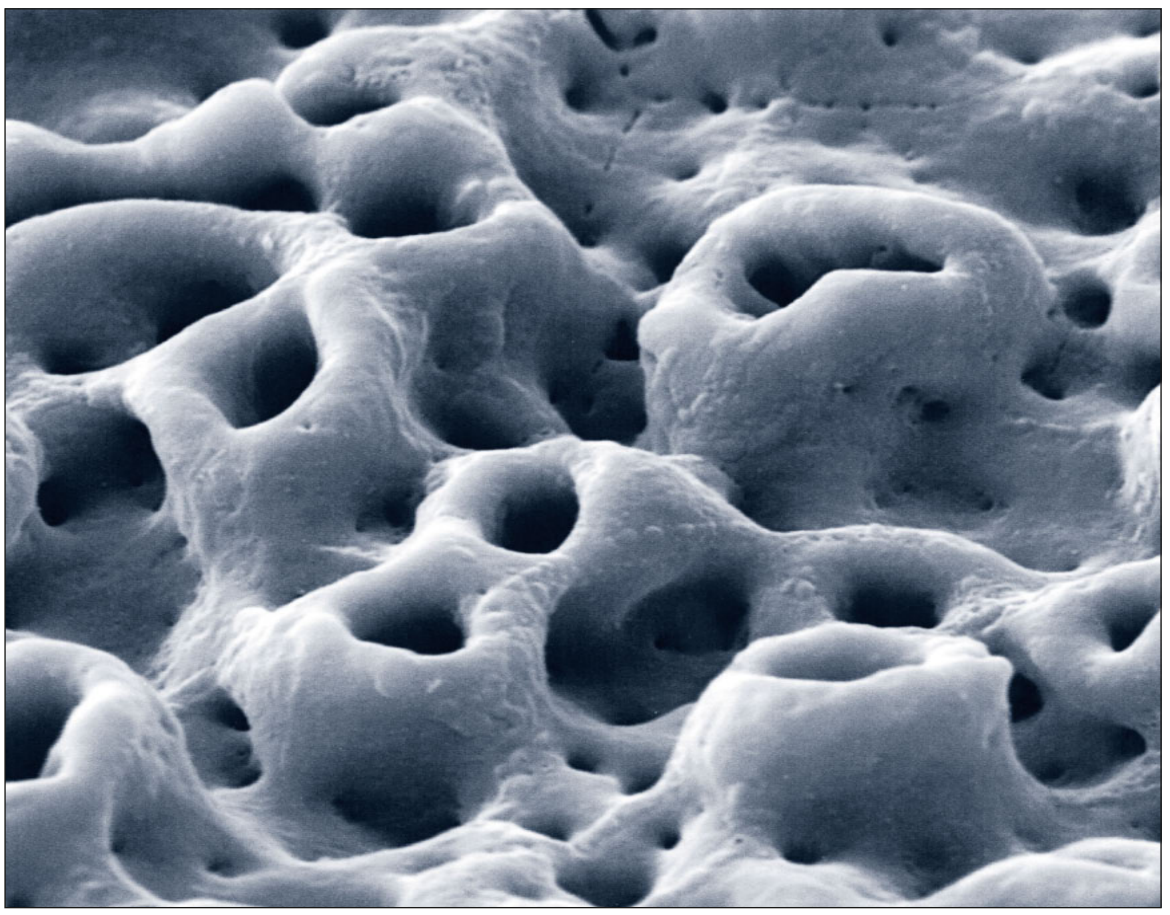
I chose the fixed denture option because I wanted to be presentable to my surroundings and to be able to communicate properly. Both are important to me.

Working together with Dr. Tom De Wit, who ultimately fitted the prosthesis, Dr. Vrielinck did a marvelous job. Shortly after surgery, I had a fixed bridge in place. I can now speak clearly and feel much more confident interacting with people.

I'm getting older and I don't want to have to cope with major dental issues later in life. Taking this step at my age means that I should be able to avoid many potential problems in the future, and for now: I couldn't be more pleased with the results! <

Bringing Success to the Surface: Fifteen Years of TiUnite®

"We see major advantages in advanced indications."



The premier moderately rough surface. With pore openings and volcano-like elevations both in the lower micrometer and nanometer range, TiUnite is produced from phosphate-enriched titanium oxide.

In 2000, the new millennium brought with it a new dental implant surface. Fifteen years later, TiUnite has built a reputation for success based on solid, scientific follow-up and is one of the most clinically researched implant surfaces in the world. What's more, after more than 15 million purchases of implants featuring its surface—TiUnite has become one of the most sought-after as well. Here's how it all began.

By Michael Stuart

For decades the staged Brånemark osseointegration protocol was the norm for dental implant placement. Then, in the 1990s, studies were published showing that a one-stage procedure with early or even immediate loading was also an option.

This new procedure reduced healing times and avoided repeated surgery—great for the patient. But the impact on the bone-to-implant surface was a challenge. A new surface that could speed up bone apposition was needed. The solution was TiUnite.

15 TiUnite®
15 years
15 million
implants

Fast, strong and stable osseointegration

The TiUnite implant surface was designed to enhance osseointegration, and does so even under the most challenging conditions. It's created by using anodic oxidation to make a thickened layer of moderately rough titanium oxide.

TiUnite's micropores help ensure high osteoconductivity and firm anchorage in newly formed bone.

These characteristics result in faster, stronger osseointegration compared with machined surfaces. It has been proven that bone grows into the pores of TiUnite, leading to strong interlocking between the surface and the bone.

Increased survival rates

Since it hit the market 15 years ago, TiUnite has virtually replaced the original machined surface. The shift from machined implants to those with TiUnite has shown a clear decrease in early failures, especially in areas with poor bone density. TiUnite also makes immediate loading possible more frequently, and with superior outcomes compared to a machined surface. (Jungner et al. Clin Oral Implants Res. 2005). As a result, TiUnite is now featured on all Nobel Biocare implant systems.

For clinicians like Dr. Thomas Müller-Hotop in Germany, there's no going back. "Ever since the TiUnite surface became available, we have used it for all kinds of indications in our dental office," he explained.

"We see major benefits in advanced indications such as immediate implant placement, immediate loading and implant placement in soft bone conditions." <

→ More to explore!
Find out more about TiUnite at nobelbiocare.com/tiunite. References supporting statements made in this article can be found in the online article at: nobelbiocare.com/news.

In Brief

Gershkoff-Goldberg Award presented to David Vassos

Dr. David Vassos of Edmonton, Alberta, Canada, was recently presented with the 2014 Aaron Gershkoff–Norman Goldberg Award by the American Academy of Implant Dentistry (AAID).

Honoring an individual who exemplifies the AAID co-founders' commitment to implant dentistry, the award went to Vassos this year in recognition of a long and distinguished career.

A founding member of the Canadian Society of Oral Implantology, Dr. Vassos is also a prolific writer and lecturer who has taught, advised and mentored hundreds of dentists over the years.

→ To read the citation: www.aaid.com/news_and_publications/89.

Updated and extended range of retrieval instrumentation

Although implants and restorative components from Nobel Biocare rarely need to be replaced, the company provides a complete line of rescue instruments to deal with such uncommon circumstances.

The new retrieval instrumentation array consists of implant, abutment, and abutment screw retrieval instruments for any retrieval situation involving a Nobel Biocare component. The range is divided into three specialized kits, and will be available to customers this spring.

The implant retrieval kit includes both the Implant Retrieval Instrument for more straightforward implant retrieval cases, and the Trephine Drill for cases where the implant is extremely well osseointegrated.

The abutment/clinical screw retrieval kit consists of three types of instruments: the Abutment Screw Remover, which can be used when the screw is easily accessible; and the Reserve Drills and Abutment Screw Retrieval Instruments for more complicated cases.

As far as abutment retrieval is concerned, dedicated abutment retrieval instruments are available for conical connection abutments in zirconia and titanium. For other abutments and simple cases, a general Abutment Release Pin—also part of the abutment retrieval kit—is recommended.

→ For more information, contact your local Nobel Biocare representative.

Special NobelProcera® Abutment offer for 3Shape users

It's now even easier for 3Shape users to achieve high esthetics with NobelProcera CAD/CAM Abutments. For a limited time, you can design a NobelProcera Abutment together with a Nobel Biocare representative and we'll deliver it to you free of charge.

All NobelProcera Abutments are meticulously developed and validated in order to work perfectly with the implants they are designed for. We apply high-end milling techniques individually tailored to fit each type of material and restoration. The result? Reliable product performance and longevity. And, what's more, our restorations arrive ready-to-use with no need for manual adaptation.

openaccess NobelProcera®

Would you like to experience the quality of NobelProcera Abutments for yourself? Contact your local Nobel Biocare representative.

→ Read more about this offer at: nobelbiocare.com/openaccess.

Foundation for Oral Rehabilitation Makes Three New Online Educational Tools Available

The FOR website provides access to a wealth of experience and expertise in the field of oral rehabilitation.

Meeting the needs of a growing audience consisting of dental clinicians, scientists and educators, FOR recently introduced three new digital tools, each designed to help improve patient treatment outcomes.

By Carolyn Moncel

With the online debut of Treatment Guidelines, Forums and improved Treatment Histories, the Foundation for Oral Rehabilitation has added three powerful tools to its arsenal of informative and educational features at FOR.org.

Treatment Guidelines added to FOR's educational toolbox

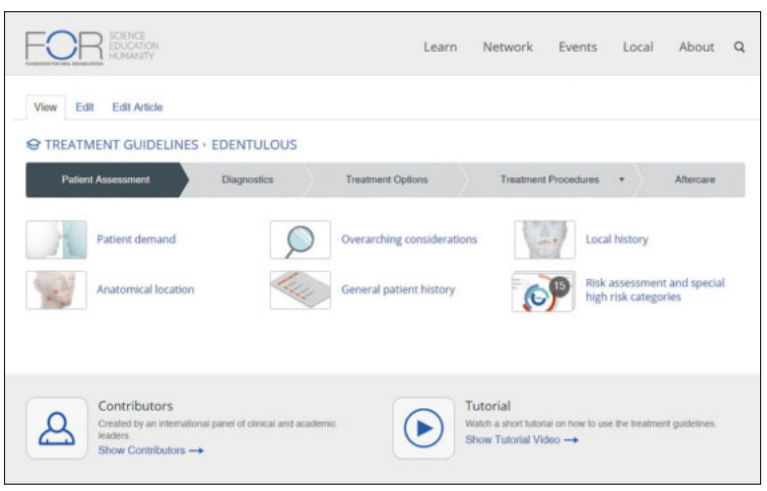
Developed by leading clinicians and scientists, the Treatment Guidelines are a comprehensive, ready reference for clinicians interested in covering implant-based treatment specifically for edentulous patients.

Including all treatment phases—from patient assessment and diagnostics to treatment options, procedures and aftercare—this multi-disciplinary tool comprises topics from both prosthetic and surgical perspectives, and incorporates the key evidence-based protocols essential to ensure proper treatment outcomes.

According to FOR's Clinical Educational Director, Dr. Jürg Kleinmann, the Treatment Guidelines are not only an efficient reference tool for clinicians at an early stage of their careers, but also for experienced clinicians. "For those who wish to refresh their knowledge with the latest evidence-based findings available," he says, "a tool like this one provides direct access to resource-rich information."

A patient-centered online tool available for tablets and other mobile devices, as well as for personal computers, the Treatment Guidelines also provide links to a full range of additional resources such as patient treatment histories and documentation, reference literature in PubMed, and video lectures.

FOR released the Treatment Guidelines for edentulous patients in mid-February. Additional topics, such as single tooth indications, are also planned as part of future updates and extensions.



FOR Treatment Guidelines for endentulous patients are located at FOR.org/en/treatment-guides.

FOR unveils Forums

Further enhancing the website, FOR has also added Forums, which are designed to help both experienced clinicians and young dental students alike share clinical cases and build personal and professional connections.

When using Forums, clinicians and dental students have an opportunity to engage in both global and local discussions; to receive treatment advice via anonymous or public postings; and to post and share an unlimited number of images, videos and/or documents with colleagues. The Forums already have three active groups, one based in South Africa, another in Spain, and the third devoted to the topic of zygoma implants.

The South African group is currently the most popular. It has developed from a pilot project, which soft-launched during the South African Association of Osseointegration's (SAAO's) Inaugural Congress in October 2014.

FOR expert Dr. Louwrens "Blackie" Swart currently moderates this group, in which participants discuss a wide range of topics, ranging from cases involving retained primary canines to those involving trauma.

Bringing professionals together

According to Dr. Luc Vrielinck of Belgium, who serves as the moderator for the zygoma implant group, "One of the most wonderful aspects of FOR.org is that it facilitates interaction via discussion forums.

"Because our topic is a multidisciplinary subject, implant surgeons, prosthodontists, general dentists, dental technicians—as well as product specialists, CAD/CAM specialists and engineers—can all work together in order to treat cases which can no longer sustain standard implant therapies."

Expect additional Forums to come online as the base of moderators and participants grows.

Improved Treatment Histories now available

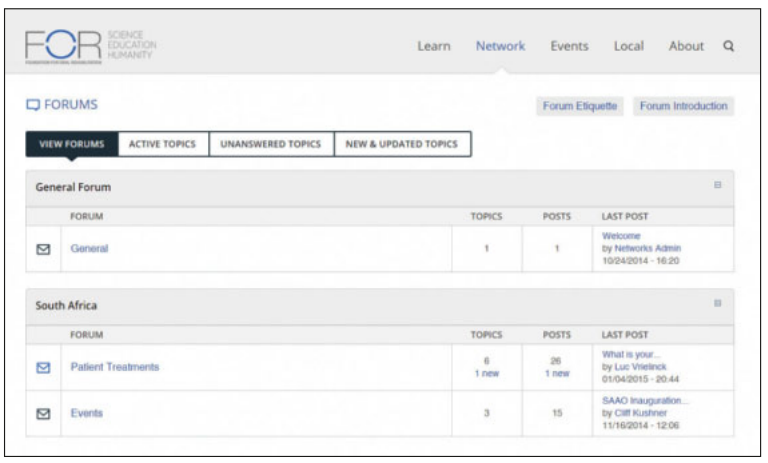
FOR has also just released an updated version of its popular online Treatment Histories section. Here, clinicians are able to view cases in order to optimize their treatment outcomes.

The latest version displays a number of improvements, including a simplified visual landing page with three treatment solution-oriented access points: Single-unit restorations, Multi-unit restorations and Complete-arch treatments.

Among other new features, concise, scrollable treatment histories are now contained on single pages, necessitating no page loads between treatment steps; and relevant treatment information is now available on a single pop-up screen that can be viewed anytime.

An improved photo gallery for easier image comparisons of treatment steps has been incorporated into the online update—as have comprehensive links to PubMed abstracts that directly relate to the treatment history being viewed.

"For busy clinicians, having treatment images and information nicely summarized in one document is ideal," says FOR's Clinical Education Manager, Dr. Ana Kovats. "Beyond this, we hope that clinicians will be encouraged to submit and share their own cases with peers and also with our community of experts." <

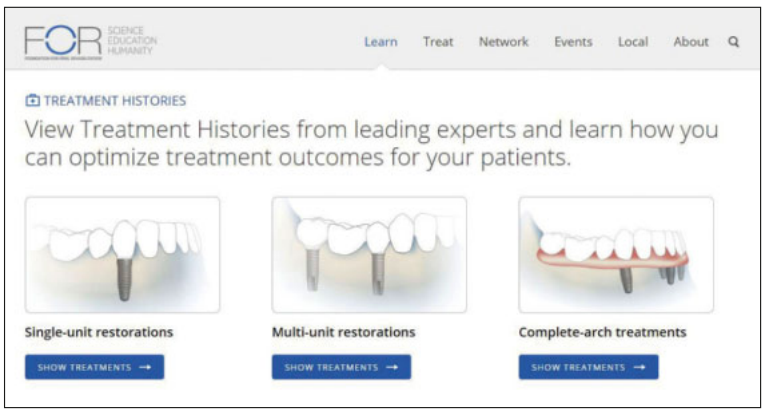


FOR Forums help clinicians and dental students build both personal and professional connections. Join the discussion at FOR.org/en/forum.

→ More from FOR:

To receive regular updates on upcoming events and activities, follow FOR using these social media platforms:

Facebook facebook.com/for.organisation
Linkedin linkedin.com/company/foundation-for-oral-rehabilitation
YouTube FORFoundation
Twitter @for_org



FOR's improved Treatment Histories have three access points. View them at FOR.org/en/treatment-histories.

Fourth Tool Coming Soon!

FOR plans to enter the field of digital publishing with a multimedia eBook on single implants.

By Carolyn Moncel

A new *e*Book entitled, *Single Implants and Their Restoration*, co-edited by Drs. Charles J. Goodacre and Pat Naylor, will soon be published by the Foundation for Oral Rehabilitation.

The digital textbook, complete with over 900 images, over 40 videos and more than a thousand scientific and literature references, is a comprehensive primer that provides clinicians with well-researched information on the best practices for single implant placement and restoration. Don't miss the next edition of *Nobel Biocare News* for more information! <

Findings about Cement vs. Screw Retention

Systematic review shows fewer complications with screw-retained restorations.

Successful prosthetic retention needs to be stable, durable, meet occlusal requirements, support healthy hard and soft tissues and provide excellent esthetics, especially in the esthetic zone. Until recently neither cement nor screw retention were believed to meet all of these criteria. However, new clinical data suggest that—when it comes to hard and soft tissue response—screw retention is a superior option.

By Dr. Ewa Bednarek

Hard tissue response associated with screw retention is comparable or better than that associated with cement retention. In a pooled analysis of single-tooth restorations in the esthetic zone, the use of a cement-retained vs. a screw-retained provisional crown was associated with significantly higher marginal peri-implant bone loss at ≥1-year follow-up (Slagter, 2014). However, a clinically irrelevant difference at 4 years and no difference at 10 years have been reported in another study (Vigolo, 2012).

Soft tissue analysis using a modified plaque index and a sulcus bleeding index reveals that peri-implant soft tissues respond more favorably to screw-retained crowns when compared with cement-retained crowns. One possible underlying reason for this result is excess cement, which in this study has been indicated to account for over 80% of peri-implantitis cases (Wilson, 2009).

Fewer complications with screw-retained restorations

A systematic review shows that screw-retained solutions exhibit significantly lower technical and biological complication rates per 100 life years (Wittneben, 2014):

- Cement retention was associated with a 9x increase in loss of retention and almost 4x more frequent abutment loosening (both P<0.01).
- Fracture or chipping occurred more commonly (3.5 times) with screw retention (P=0.02).
- Event rates for loss of the access hole cover and screw loosening were 0.81 and 1.76 per 100 life years, respectively.

Lower failure rates with two-piece screw-retained restorations

Overall, the difference in survival between cement-retained vs. screw-retained restorations is very small. However, estimated failure rates associated with two-piece screw retention are significantly lower than for cement retention (P=0.00).

In view of recent data tying cement retention to an increased likelihood of peri-implantitis, the current consensus statement (Wismeijer, 2014) has limited the recommended use of cement to the following situations:

- For short-span prostheses with margins at or above tissue level (in order to simplify fabrication procedures).
- To enhance esthetics when the screw access passes transocclusally or vestibularly, or in cases of malposition of the implant.
- When an intact occlusal surface is desirable.
- To reduce initial treatment costs.

Excess cement should be avoided

Wadhwani and Piñeyro surveyed over 400 dentists, finding that many of them place up to 20 times more cement than is required to secure the crown, while others fail to use the required minimum amount. Such overload means up to 95% of the placed cement is extruded at the restorative margin. This margin is frequently found below the gum, making cement removal on implant-supported restorations virtually impossible. <

→ More to explore!

Drs. Wadhwani and Piñeyro describe a technique for minimizing excess cement in "Implant Cementation, Step by Step," available online at: nobelbiocare.com/news.

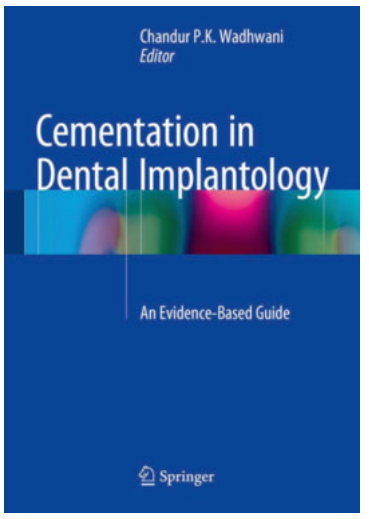
Comprehensive Look at Cementation on Implant Posts

According to *Cementation in Dental Implantology*, cementation during the restorative phase of oral implant-based treatment can be the source of significant problems. Nevertheless, too few dentists have a clear understanding of why related disease processes arise, and there is a similar lack of awareness of the factors to be considered in cement selection.

This book examines in detail the issues associated with cementation in dental implantology, with a particular focus on residual excess cement and its consequences. It provides reliable guidance on cement selection and use on the basis of the latest scientific research.

Among the topics addressed are microbial aspects of cement selection, new abutment designs, esthetic considerations, margin placement, and the role of radiography. The relation of peri-implant disease to residual excess cement is explored in depth, and alternatives to the cementation process are also considered. All of the chapters have been written by leading experts in restorative and surgical dental implantology.

According to the editor, Dr. Chandur Wadhwani, the information supplied is designed to change the way in which the dentist thinks and practices by replacing assumptions and reliance on anecdotes with evidence-based knowledge. <



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